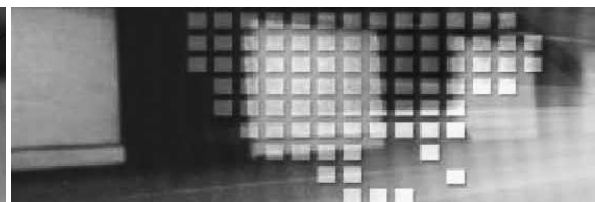
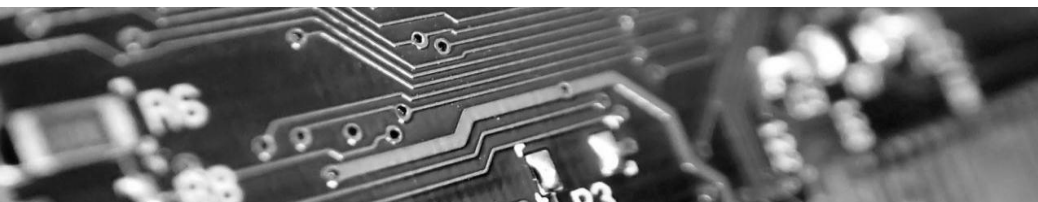




Vision Metering

EndSight™ User's Manual



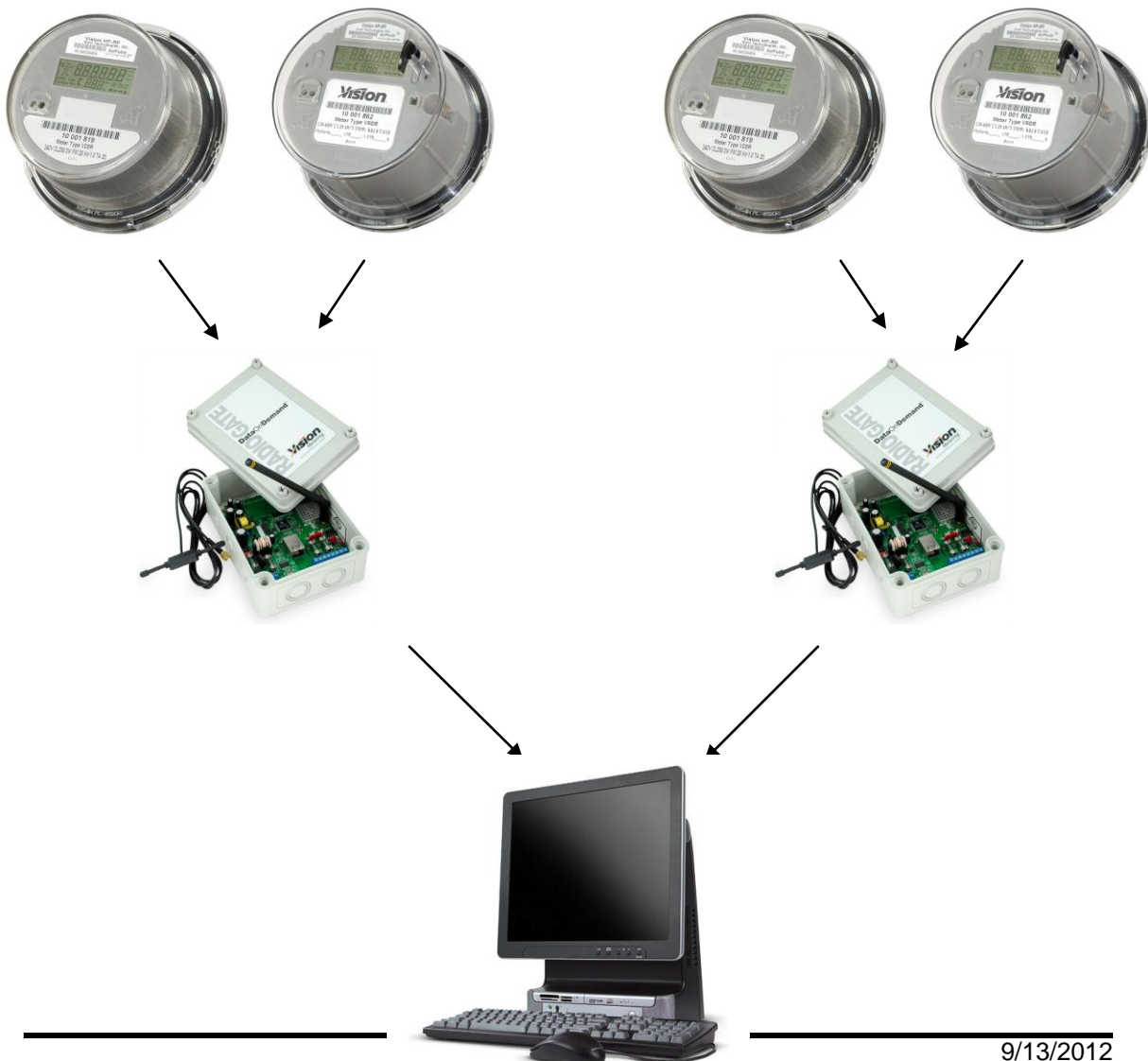
ES-080312-REV2

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Chapter: 1

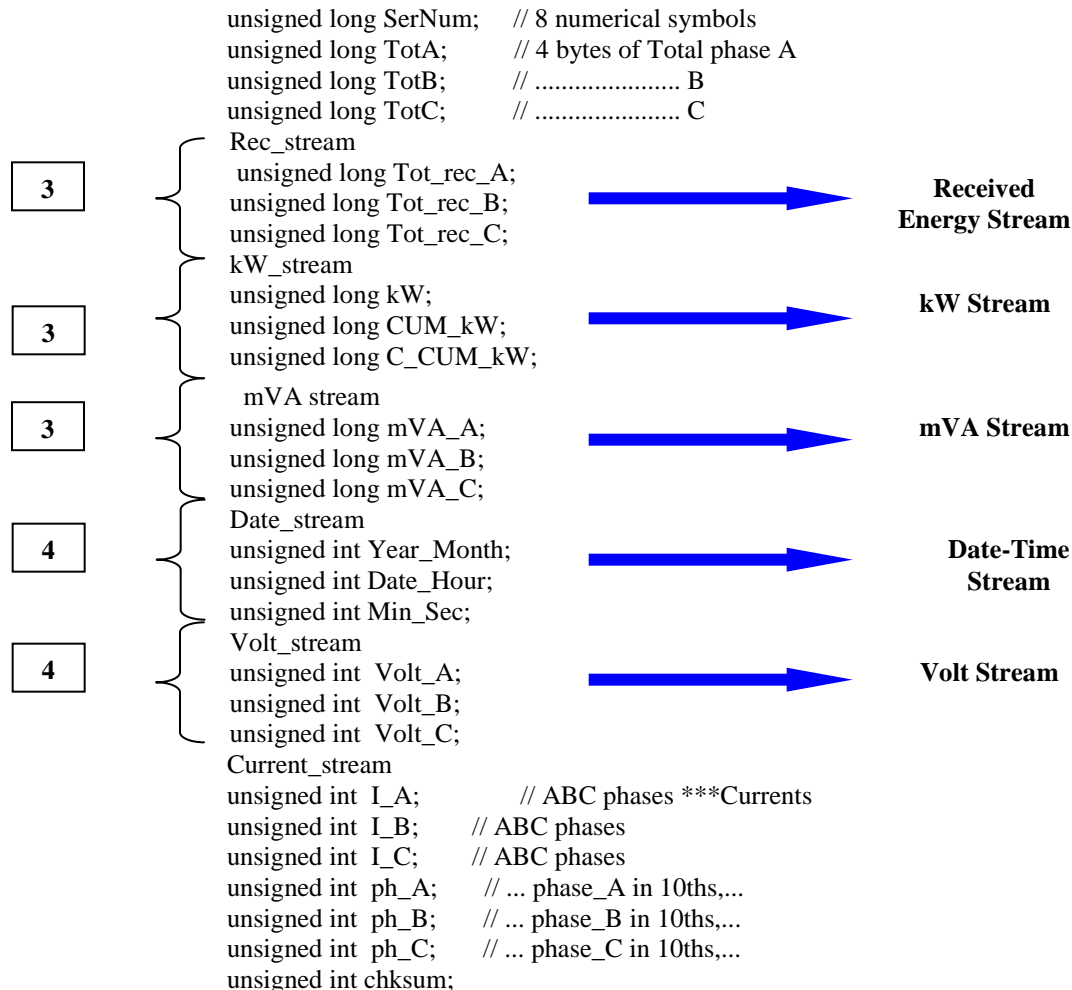
System Overview

The **EndSight™** software is used in conjunction with both **Vision™** meters and the **Radio Gate™** collectors which create the complete **DataonDemand™** system. The meters are programmed to customer specifications. Several forms of data streams are available and selectable from **EndSight™**. The meter firmware has data stream embedded, therefore the meter must be ordered with a specific data stream. The meter sends this information to the collector which in turn delivers the data to the head end computer. This computer houses the software that allows a user to interpret the data, print reports and create a historical customer database.



Data Streams

As mentioned in the system overview, the data stream is the data that the meter sends to the radiogate. This data contains the information that the customer would like to retrieve from the meter. There are currently six segments of the data stream. The packet structure is found in the Host Information screen. Segments 3 and 4 may be chosen by the customer and the meters are programmed accordingly. The packet structure selections in EndSight must match the programmed meters in order to receive the proper data. The data stream is shown below along with the selectable segments for segments 3 and 4. More information on the packet structure screen can be found on page 15.



System Configuration

It is recommended that this software be installed on a PC with at least a 64-bit operating system. It is also suggested to use Windows 7 and have a minimum of 2GB of RAM installed. This software is used in conjunction with Microsoft® SQL Server 2008 R2 Express with tools. Two SQL Server installation files have been provided. Ensure installation of the correct version depending on whether your system is 32bit or 64bit. For 32bit systems use the SQLEXPRTW_x86_ENU.exe file. For 64bit systems use the SQLEXPRTW_x64_ENU.exe file.

Depending on the computer's operating system it may be necessary to download other service packs in order for the server to be installed and run properly. Upon downloading the server follow all of the instructions and prompts provided by the installation guide. Once the server is installed on the computer, the next step is to connect to the server. To access the Microsoft Server Management Studio left click the start button. Then left click on SQL Server 2008, and finally left click on Server Management Studio. This access can be simplified by creating a shortcut link on the desktop or pinning it to the taskbar. The link to the server is established with an INSTANCE ID. Simply use the same INSTANCE that was created during the installation process and left click the connect tab. This INSTANCE is input in the window pictured in figure 1.

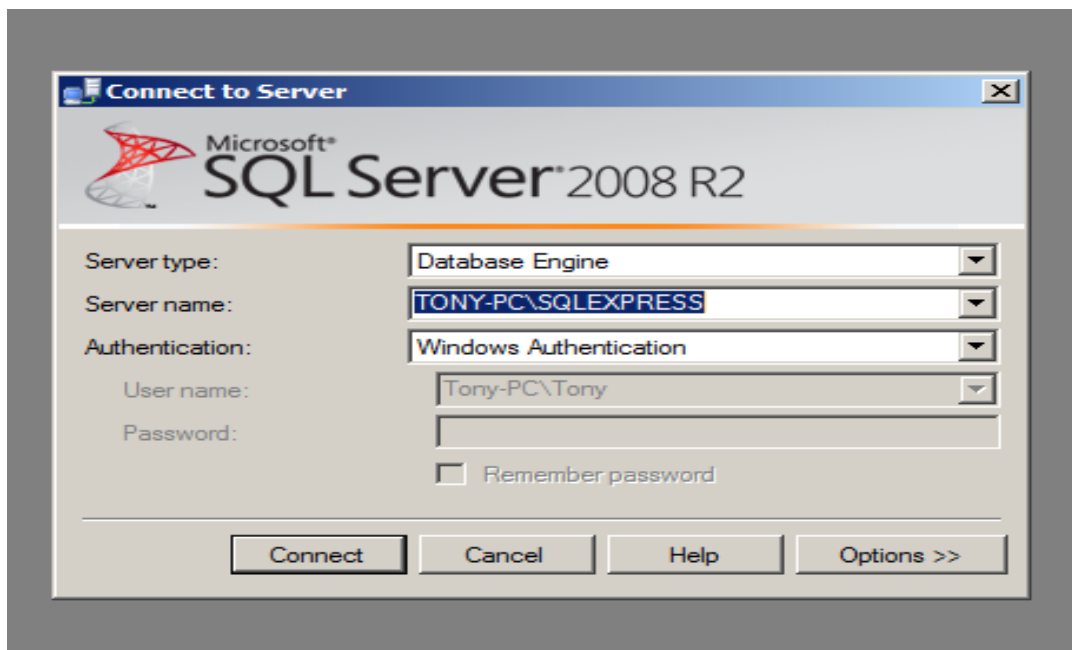


Figure 1

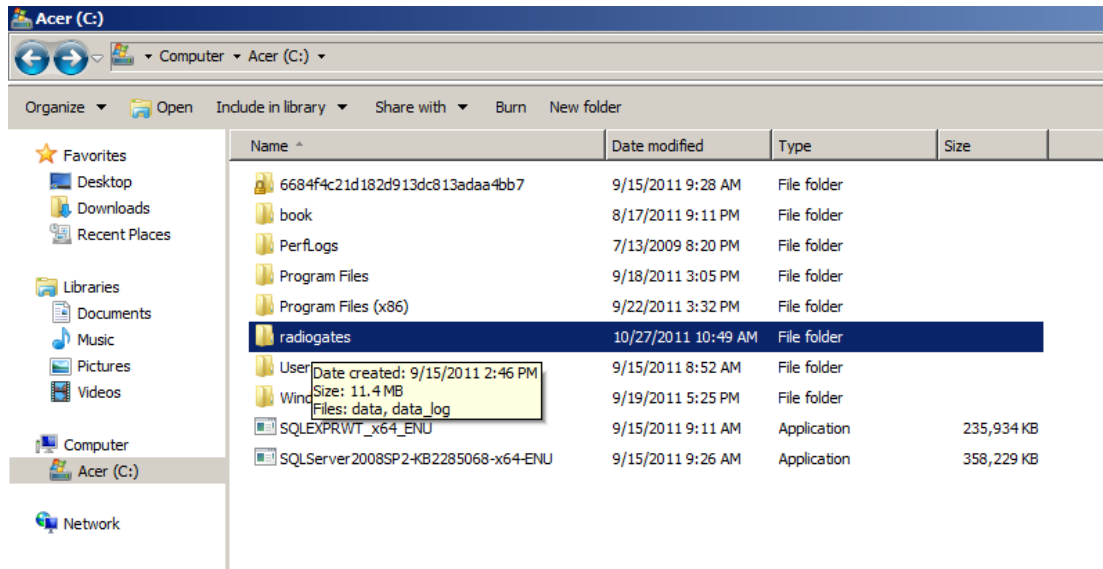


Figure 2

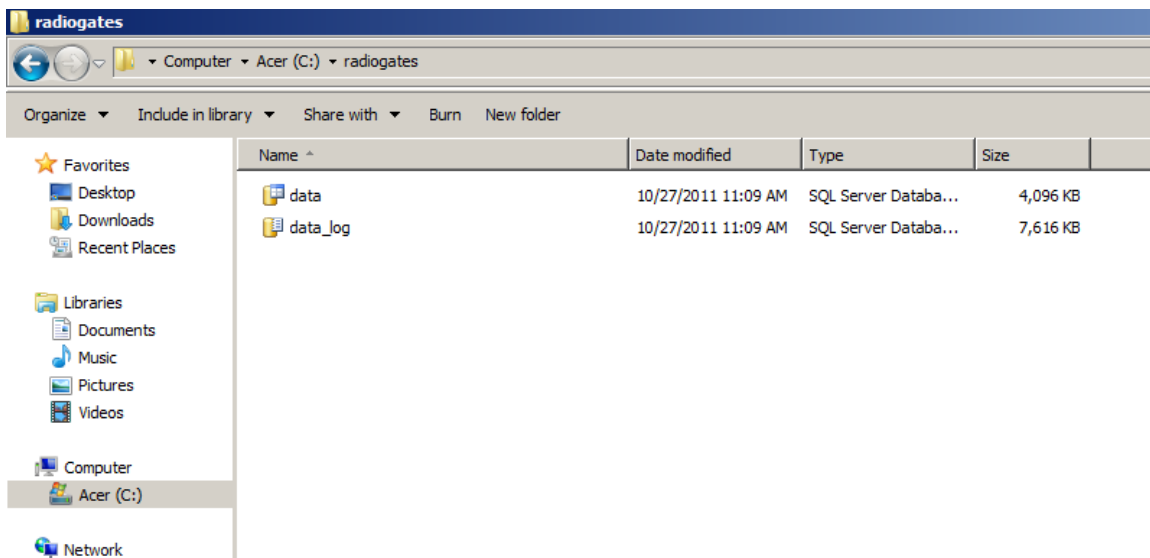


Figure 3

Next, open the Server Management Studio and verify that the server is still connected. If it is not, reconnect and right click on database and select attach. This is where to select the files located in the *radiogates* folder. This is shown in figure 5 and figure 6.

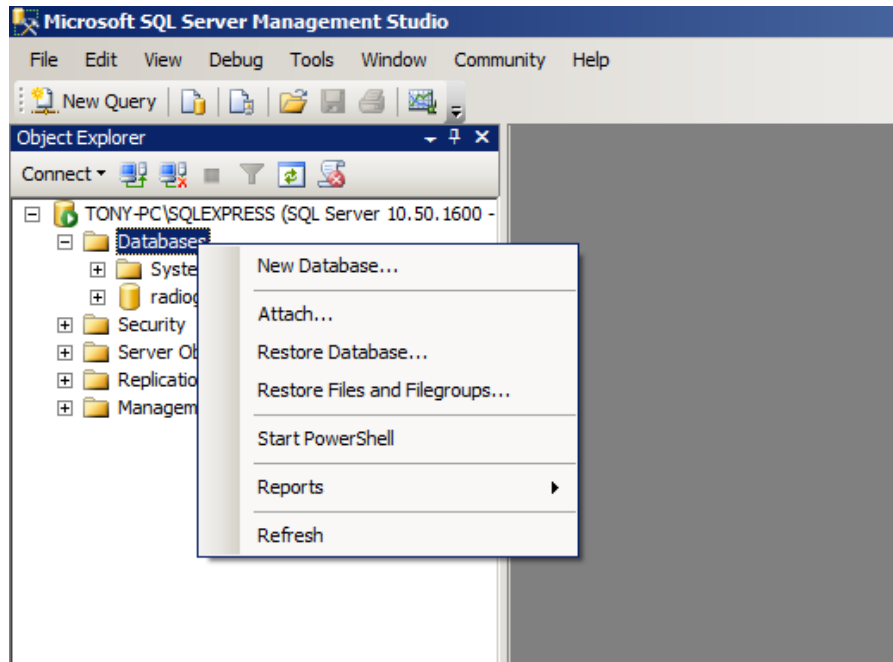


Figure 4

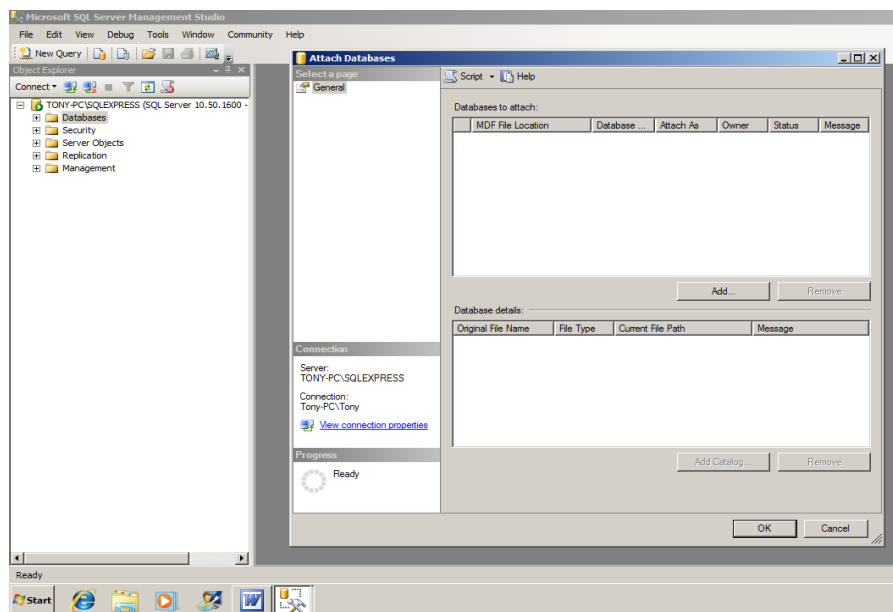


Figure 5

Once the attach databases screen window is up, left click on the add button. This will show you the folders listed on the hard drive. Select the **radiogates** folder and then the data file. If the error message appears and will not attach then return to the radiogates folder and right click on each of the two folders and select properties. Left click on security and ensure that full control is checked. If not, then check full control and click apply. Now try to attach once again.

Now that the server and database are installed and connected the only thing left to do is install the EndSight software and connect it to the database. Save the software and right click on the file and create a shortcut to the desktop. At this point everything needed is installed and accessible from the desktop. Open the EndSight program by left clicking on the shortcut icon and a window will open like the one pictured in figure 6.

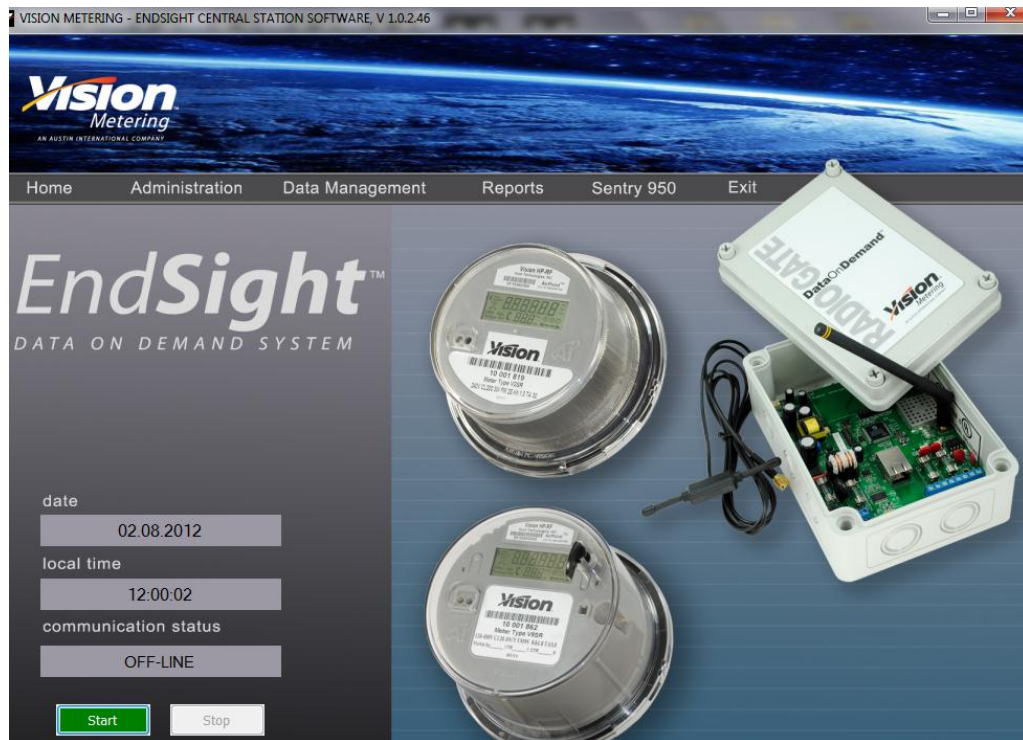


Figure 6

To connect the program to the database left click on the **Administration** button which opens a drop down menu that looks like the one pictured in figure 7. There are several options located in this menu; however the one needed at this point is **Host Information**. This window looks like the one pictured in figure 8. The three categories to choose from are **General**, **Database**, **Packet Structure** and **Geo Service**. At this

point, select **Database**. Input the exact same INSTANCE ID that has been used thus far. Leave the attached database as radiogates and leave the authentication as windows. Do

not change the username or password. Next, test the connection by clicking the test connection button which is located at bottom left of the screen. This is shown in Figure 8.

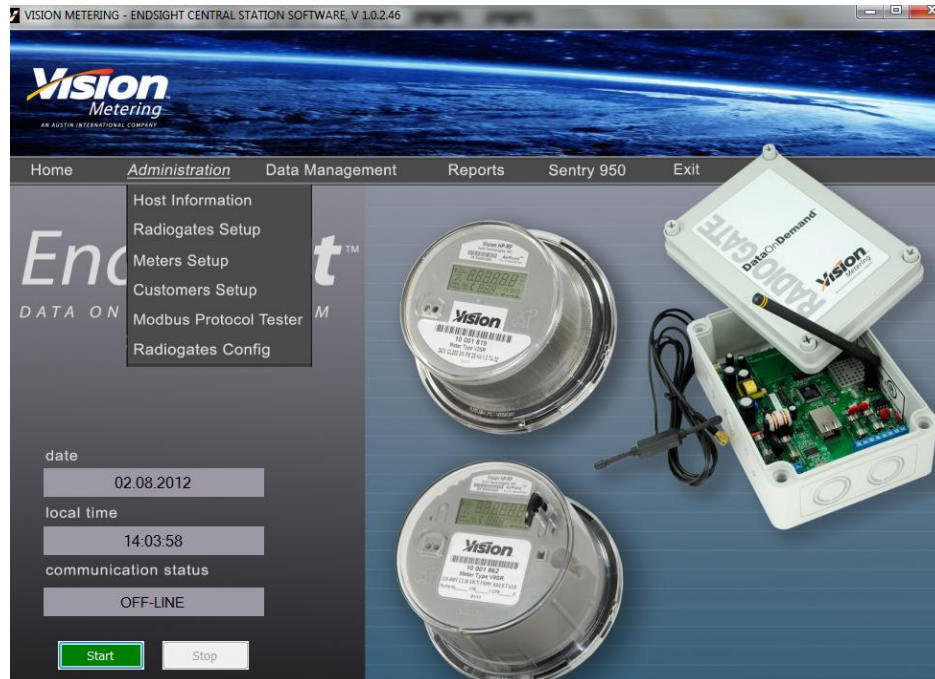


Figure 7

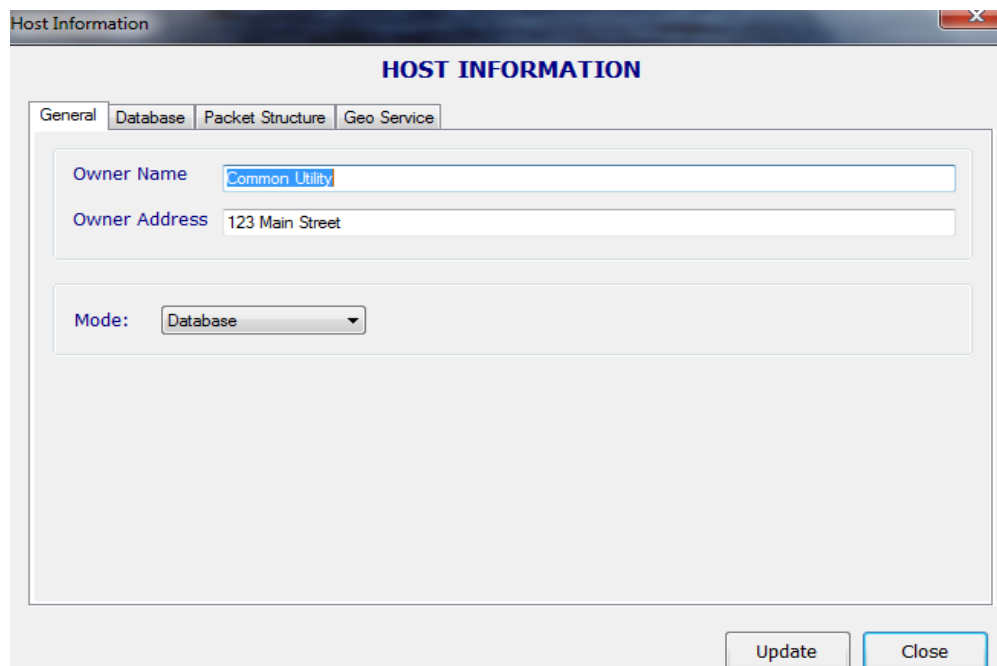


Figure 8

If all is well, **Connection OK** will be displayed in a new window like the one in figure 9. If not, the error most likely lies in the INSTANCE ID. Simply verify that it is the same.

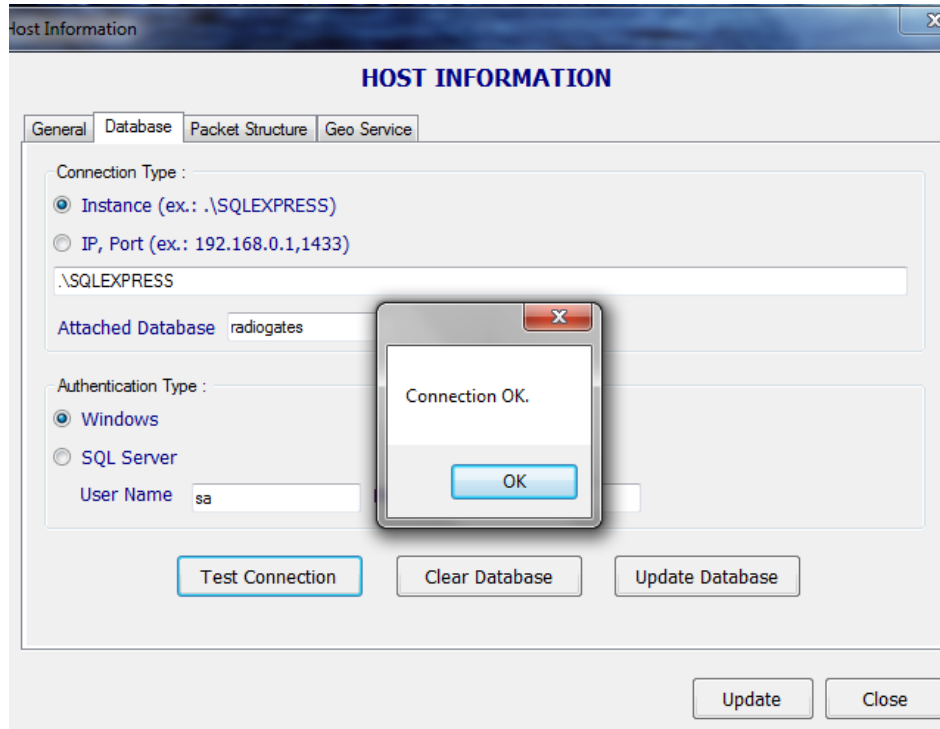


Figure 9

Congratulations, the SQL server, database, and **EndSight™** software have been successfully installed. The next chapter will cover all aspects of **EndSight™** software and how to utilize them.

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Chapter: 2

Home Page

Now that everything is installed and running properly, it is time to become familiar with the EndSight software itself. Start by dissecting the home page. The picture below is the main page where navigation through **EndSight™** begins.



Figure 10

This is the home page shown in Figure 10. While in sub categories or different pages, returning to the home page can be done with a left click on **Home**. On this page the date and time are displayed in the lower left hand corner. In addition, notice the communication status which can be either **OFF-LINE** or **READ DATA**. Just below the communication status section are the **Start** and **Stop** buttons which begin or cease data collection respectively. To begin collection of data left click the **Start** button and to stop collection of data left click the **Stop** button. Along with the **Home** button; **Administration**, **Data Management**, **Reports**, **Sentry 950** and **Exit** are located on the banner near the top of the page. Before continuing forward into each of these segments, notice the **Exit** button. A left click on this tab will close this program.

Administration

Clicking on **Administration** will offer numerous choices to select from as shown in figure 11. This is a menu for most of the initial setup functions for the radiogates and meters as well as the program itself.



Figure 11

Host Information

Recall, clicking on this tab opens the screen shown in figure 8 on page 11, where the connection to the database was made. Click on **Host Information** and open a window like the one pictured below in Figure 12. In this window there are four subsections; **General**, **Database**, **Packet Structure** and **Geo Service**. **General** provides three fields, two of which allow the user to input **Owner Name** and **Owner Address**. The other additional field is **Mode**. **Mode** offers the choice of *File* or *Database*. *File* is used for systems that do not use a database and server. The data is then available in the form of an Excel spreadsheet. *Database* is the default. By clicking on **Database** tab a window that looks like the one in Figure 13 opens. Because this step has already been completed while connecting to the database and it has been verified that the connection is good; leave all of the setting on this page alone for now. The

Update Database button will update the database SQL file which eliminates multiple steps when updating Endight software.

The screenshot shows the 'Host Information' dialog box with the 'General' tab selected. The title bar says 'Host Information'. The main title is 'HOST INFORMATION'. Below the title bar are four tabs: 'General', 'Database', 'Packet Structure', and 'Geo Service'. The 'General' tab contains the following fields: 'Owner Name' with the value 'Common Utility', 'Owner Address' with the value '123 Main Street', and a 'Mode' dropdown menu set to 'Database'. At the bottom right of the dialog are two buttons: 'Update' and 'Close'.

Figure 12

The screenshot shows the 'Host Information' dialog box with the 'Database' tab selected. The title bar says 'Host Information'. The main title is 'HOST INFORMATION'. Below the title bar are four tabs: 'General', 'Database', 'Packet Structure', and 'Geo Service'. The 'Database' tab contains the following fields: 'Connection Type' with two radio buttons, 'Instance (ex.: .\SQLEXPRESS)' selected, and 'IP, Port (ex.: 192.168.0.1,1433)' unselected; a text field containing '.\SQLEXPRESS'; 'Attached Database' with the value 'radiogates'; 'Authentication Type' with two radio buttons, 'Windows' selected, and 'SQL Server' unselected; 'User Name' with the value 'sa' and 'Password' with the value 'password'. At the bottom of the tab are three buttons: 'Test Connection', 'Clear Database', and 'Update Database'. At the bottom right of the dialog are two buttons: 'Update' and 'Close'.

Figure 13

The **Packet Structure** tab allows modification of data stream delivered. However, the selections made in fields 3 and 4 must be how the meters are programmed. The packets can not contain every option at the same time but we do provide these options to the customer. This allows for a customized data stream ideal for individuals clients. Figure 13A shows the options for field 3. Figure 13B show the selectable options for field 4.

The screenshot shows the 'HOST INFORMATION' window with the 'Packet Structure' tab selected. The window contains a list of six fields for configuration. Field 3 is currently set to 'mVA', and its dropdown menu is open, showing 'mVA', 'Received Energy', and 'kWmax'. Field 4 is currently set to 'mVA'. The other fields are: 1. Serial Number, 2. Total Energy, Phase A, Phase B, Phase C, kWh, 5. Current, Phase A, Phase B, Phase C, A, and 6. Voltage-Current, Angle A, Angle B, Angle C. At the bottom right are 'Update' and 'Close' buttons.

Field Number	Field Description	Current Selection	Available Options
1.	Serial Number		
2.	Total Energy, Phase A, Phase B, Phase C, kWh		
3.		mVA	mVA, Received Energy, kWmax
4.		mVA	
5.	Current, Phase A, Phase B, Phase C, A		
6.	Voltage-Current, Angle A, Angle B, Angle C		

Figure 13A

The screenshot shows the 'HOST INFORMATION' window with the 'Packet Structure' tab selected. The window contains a list of six fields for configuration. Field 3 is currently set to 'mVA'. Field 4 is currently set to 'Volt', and its dropdown menu is open, showing 'Volt' and 'Date-Time'. The other fields are: 1. Serial Number, 2. Total Energy, Phase A, Phase B, Phase C, kWh, 5. Current, Phase A, Phase B, Phase C, A, and 6. Voltage-Current, Angle A, Angle B, Angle C. At the bottom right are 'Update' and 'Close' buttons.

Field Number	Field Description	Current Selection	Available Options
1.	Serial Number		
2.	Total Energy, Phase A, Phase B, Phase C, kWh		
3.		mVA	
4.		Volt	Volt, Date-Time
5.	Current, Phase A, Phase B, Phase C, A		
6.	Voltage-Current, Angle A, Angle B, Angle C		

Figure 13B

Figure 14 shows the **Geo Service** screen. Here the user may enter the local address which simplifies the map search when locating a meter's geographic location. Enter the address and click the *Get Coordinates* button then click *Update*. The HTML field is only used if the user chooses to use a server other than default.

Host Information

HOST INFORMATION

General Database Packet Structure Geo Service

Starting Map Search Point :

Address York, SC, 28012

York Rd, Charlotte, NC 28278, USA

Latitude 35.1008097 Longitude -80.9928408

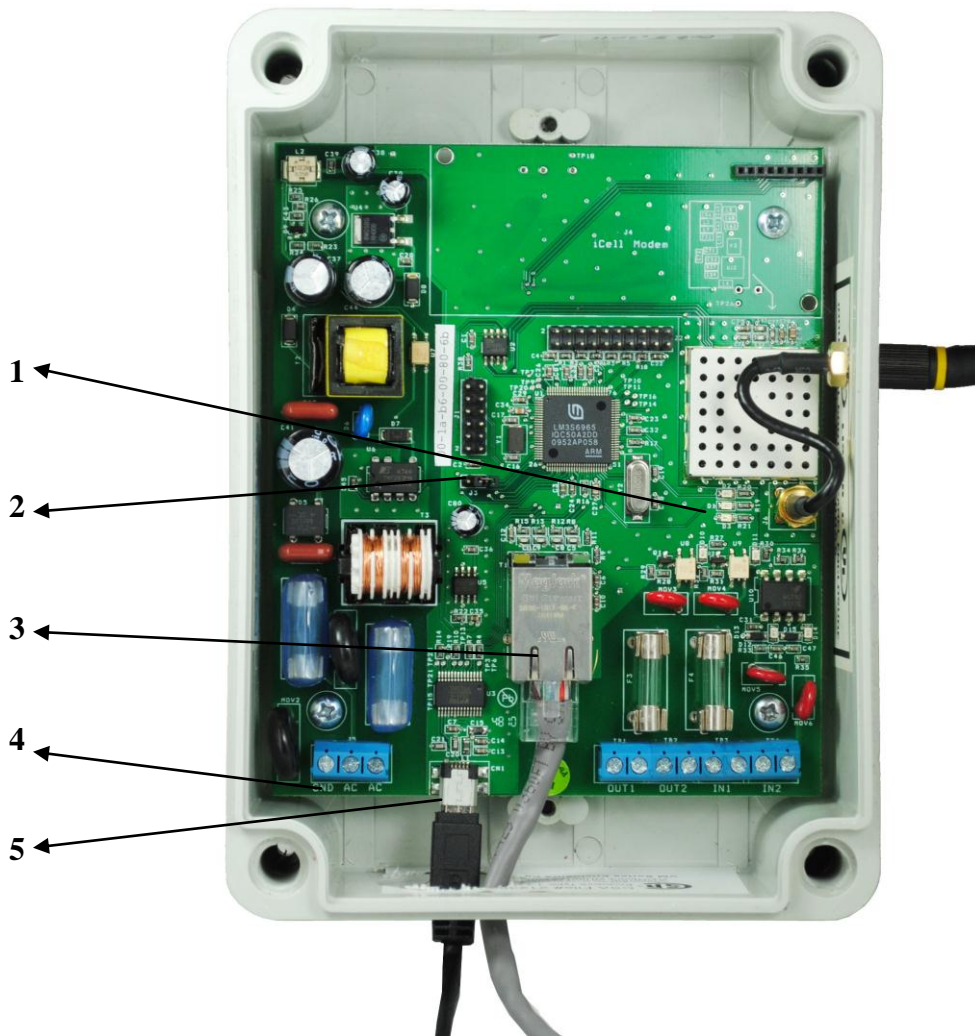
Google HTML server:

Figure 14

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Radiogate

This is a picture of the radiogate with the cover removed. In location **1** there are three LED's. Green will be illuminated when power is supplied. Red will pulse and is the "heartbeat" of the radiogate. Yellow will be illuminated as data is being received. Location **2** is the jumper used when switching between dynamic and static IP addresses. Location **3** is the connection for the internet cable. This is only used on the primary radiogates sending the data to the head end computer. Location **4** is the power connection for 120/277. Location **5** is the mini USB connection which is used to program the radiogate with the computer.



Radiogates Setup

Clicking on this link opens the page shown below in Figure 14. Here is where maintaining control of the radiogates in the field is accomplished. This is used for the radiogates that have direct access to the internet. Other radiogates in the field share information, collect data, and retransmit data to the primary radiogates with internet connections which send the information to the head end computer. This window provides access to add, remove or edit radiogates. When adding a radiogate to the system click the **Add** button and a window that looks like the one in Figure 15 opens. There are several fields to input. **Radiogate Name** can be any characters. Simply use the IP address or the physical address. **Type** should typically remain modbus master. The **IP and Port** is the actual IP address of the radiogate. **Period** is the time frame of reporting data from the radiogate to head end computer. The time is assigned in seconds. For example, if the request was to have the data transmitted every five minutes the entry in this field would be 300. The user may also edit an existing radiogate by clicking **Edit**. To remove a radiogate from the system click on the chosen radiogate and simply click **Remove**.

The screenshot shows a web application window titled "RADIOGATES SETUP". Inside the window, there is a table with the following data:

Radiogate Name	Type	IP	Port	Period
208.104.19.184	modbus master	208.104.19.184	503	30

Below the table is a large grey rectangular area. To the right of the table and grey area are three buttons: "Add", "Edit", and "Remove". At the bottom right of the window is a "Close" button.

Figure 14

Add New Radiogate

General

Radiogate Name

Type

IP Address Port

Period sec.

OK Close

Figure 15

TCP Client Mode

This mode allows the head end computer to standby for transmitted data from the radiogate. The user can switch from modbus master to TCP client mode in the radiogates setup menu under the **general** tab. This gives the user the opportunity to change the IP address information remotely. The screen shot below shows where the mode change is made.

EDIT RADIOGATE SETUP

Edit Radiogate Information

General TCP Connection Settings

Radiogate Name

Type

IP Address Port

Period sec.

OK Close

**Figure
TCP1**

Once the mode has been changed to TCP client the user can enter the desired IP addresses in the same window under the **TCP Connection Settings** tab. Here the **Connect to** address is the IP address of the radiogate. This must be entered to communicate with the radiogate. To change the IP address of the computer it must be entered in the **Write Data** field. Once these fields are filled the **Read Settings** and the **Write Settings** buttons become available. The **Read Settings** button allows the user to see the current radiogate settings remotely. The **Write Data** button allows the user to change the current settings. The screen shown below is the TCP Connection Settings screen and shows the discussed fields.

**Figure
TCP2**

The screenshot shows a window titled "Edit Radiogate Information" with a close button (X) in the top right corner. Inside the window, there are two tabs: "General" and "TCP Connection Settings". The "TCP Connection Settings" tab is active. It contains two main sections: "Connect to:" and "Write Data:". The "Connect to:" section has two input fields: "IP Address" and "Port". The "Write Data:" section has three input fields: "IP Address", "Port", and "Period" (with a "sec" label next to it). Below the "Period" field is a "Repeater Level" input field. At the bottom of the "Write Data:" section, there are two buttons: "Read Settings" and "Write Settings". At the very bottom of the window, there are two buttons: "OK" and "Close".

Meter Setup

Selecting **Meter Setup** from the **Administration** drop down menu will open a window that looks like the one in Figure 16. Editing the information associated with the meters in the field can be done from this location. Although the meters are individually entered into the system under the **Data Management** drop down menu in **Import Meters Into the Database**, customizing meter information is done here. The **Serial Number** field will already be filled in after importing the meters, however from here you can add **Comm ID**, **Account ID** and **Customer Name**. This customization can be extremely helpful with regard to record keeping and reports. This information may be edited by clicking on the *Edit* button which will provide the screen shown in figure 16-1. From here the user can edit address, geographic location, account number or user defined field data.

Meters Setup

METERS SETUP

Communication Id	Serial Number	Account Id	
10002046	10002046	1	Ivanov Ivan

Edit

Close

Figure 16

Edit Meter Info

Customer Name: Ivanov I.Ivan
Serial Number: 1001208

Account Id

Address:

Street
City
State
Zip

Get Coordinates

Location:

Latitude
Longitude

Select Location on the Map

User Defined Fields:

Stop#
Route#

OK Close

Figure 16-1

After meter locations have been saved in this fashion. The user will have the ability to find a meter location from the *View Collected Data* screen. Simply double click on any given meter row and the location will appear in a new window. This is shown in Figure 16-3.

Customer Setup

In addition to customizing meter information, **EndSight™** also provides a location to personalize customer data. Figure 17 shows the **Customer Setup** screen. From here it is possible to customize individual customer information. Here the user can add, edit or remove customer information. For example, clicking the add button opens the screen shown in Figure 17-1. In this screen, there are fields to input customer name, address and phone number. If the user chooses to edit an existing entry, click the edit button and the screen in Figure 17-2 opens. This screen looks very similar to the add screen however, notice the assign meter tab located at the top of the screen. By clicking this tab, the screen shown in Figure 17-3 opens. Lastly, the user can edit the meter information associated with the customer by clicking the edit button. This action opens the window shown in Figure 17D which allows the customization of meter, address, user defined fields and even geographic location.

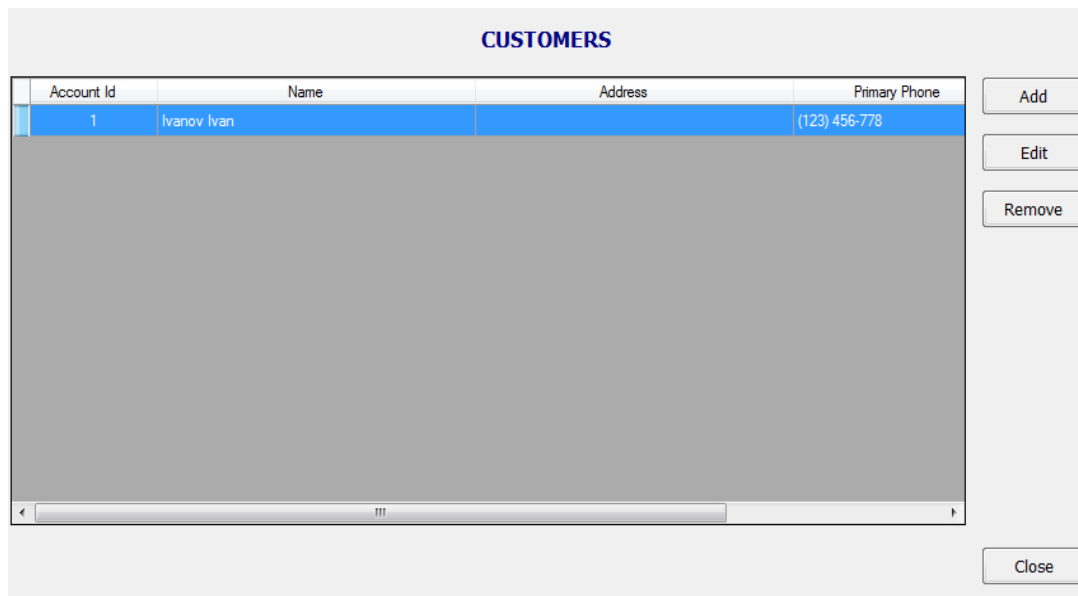


Figure 17

General

Last Name Name Middle Initial

Physical Address:

Street

City State Zip

Billing Address if different from Physical Address:

Last Name Name Middle Initial

Street

City State Zip

Phone Mobile E-mail

Update

Close

Figure 17-1

General Assign Meters

Last Name Name Middle Initial

Physical Address:

Street

City State Zip

Billing Address if different from Physical Address:

Last Name Name Middle Initial

Street

City State Zip

Phone Mobile E-mail

Update

Close

Figure 17-2

Figure 17-3

Customer Info

General Assign Meters

Account Id	Communication Id	Serial
1	1001208	2000290

Add
Edit
Remove

Close

Figure 17-4

Assign Meter

Account Id

Communication Id :

☒ From the List

Serial Number 1234567890

☐ New

Communication Id

Serial Number

Address:

Street

City

State

Zip

Location:

Latitude

Longitude

User Defined Fields:

Stop#

Route#

Modbus Protocol Tester

This selection allows testing the communication of a specific meter and it also provides the latest data. When clicking on **Modbus Protocol Tester**, a window will appear as shown in Figure 18. From this point, select the radiogates IP address and then click the **Read Data** button. Once the data is retrieved, selection of any meter serial number being transmitted from that IP address is accessible. An example of this is shown in Figure 19.

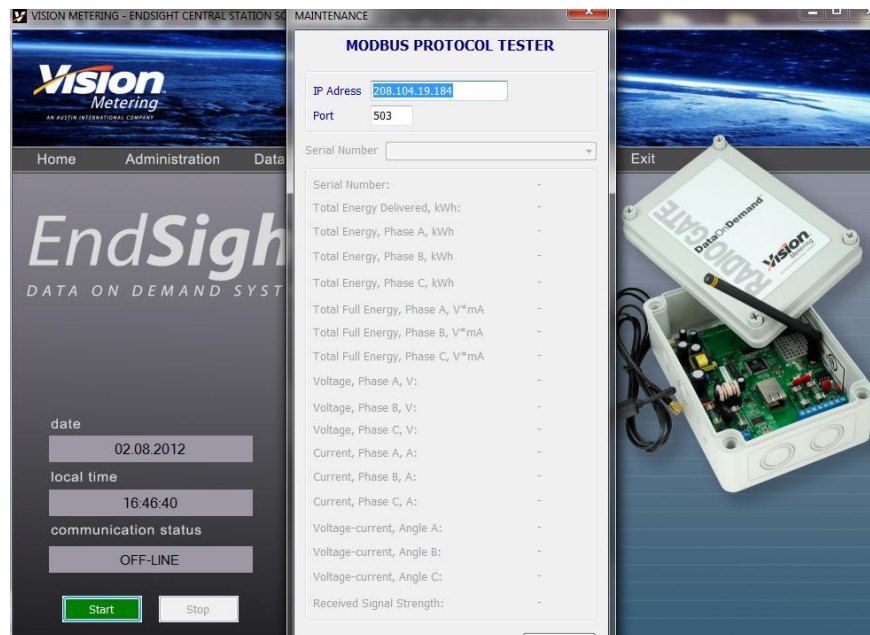


Figure 18

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Figure 19

Radiogate Configuration

Before placing the radiogate in the field, it must be connected to the computer via mini USB and programmed properly. Start by determining the function of the radiogate. Functioning as a repeater or a primary unit connected to the internet changes this process slightly. Start by plugging the USB cable into the port labeled 5 on page 17.

Under the administration tab click **Radiogate Config** and the screen pictured in Figure 19-1 will be visible. The COM Port will automatically be selected and shown in that field. Click the connect button to communicate directly to the radiogate.

The screenshot shows the 'radiogate Setup' window. At the top, there is a 'COM Port' dropdown menu set to 'COM7' and a 'Connect' button. Below this, the status 'J3: ON - Dynamic IP' is displayed in red, followed by the MAC address 'MAC: 00-1a-b6-00-80-9f'. The main area contains several input fields with 'Send' buttons: IP (0.0.0.0), Mask (0.0.0.0), Gate (0.0.0.0), Host (192.1.1.168), Port (1701), SCDA (502), Repeater (OFF), and Time (30). At the bottom right, there are 'Bootload' and 'Refresh' buttons, and a 'Close' button at the very bottom right.

Figure 19-1

The screen shown in Radiogate 1 is broken down into the following fields:

MAC: Is the assigned number to the board and firmware in each radiogate. This can not be changed.

J3: Is associated with the jumper which was pictured and labeled as 2 on page 17. This is used to change the IP address setting from Static to Dynamic. When the jumper is in place the setting is Dynamic and when it is not the setting is Static. If the radiogate is connected to the computer when the jumper is applied or removed press the enter key to refresh the setting. The Dynamic setting allows the router to assign the IP address. When using the Static IP setting the IP address must be entered manually.

To change the following fields enter the information below and press the enter key:

IP: Enter the IP address only if J3 is off (Static IP is in use) and click send.

MASK: Enter Mask address only if J3 is off (Static IP is in use) and click send.

GATE: Enter Gateway only if J3 is off (Static IP is in use) and click send.

HOST: This is the address of the head end computer. To change the address, enter the IP address and click send.

PORT: This is part of the IP address and can be changed by entering the correct port and clicking send.

TIME: This is the time frame of how often the radiogate transmits the data to the head end computer. The time can be changed by entering the desired time (in seconds) and clicking send.

SCDA: When using modbus master with Endsight the SCDA port must match. If it needs to be changed enter the proper number and click send.

REPEATER: This signifies whether the radiogate is a repeater or not. To designate the radiogate as a repeater enter 10 and click send. The numbers between 1 and 10 relate to signal strength. It is suggested to set signal strength at 10. If the radiogate is not going to be a repeater the enter 0 and click send.

BootLoad: This is used to update the firmware of the radio gate. The radiogate firmware can be updated by clicking the Bootload button. This prepares the radiogate for programming which can be done with a flash programmer. This will be discussed thoroughly on page 20.

The screen can be refreshed by clicking the refresh button. To exit the screen pictured in radiogate1 click the close button.

Updating Firmware

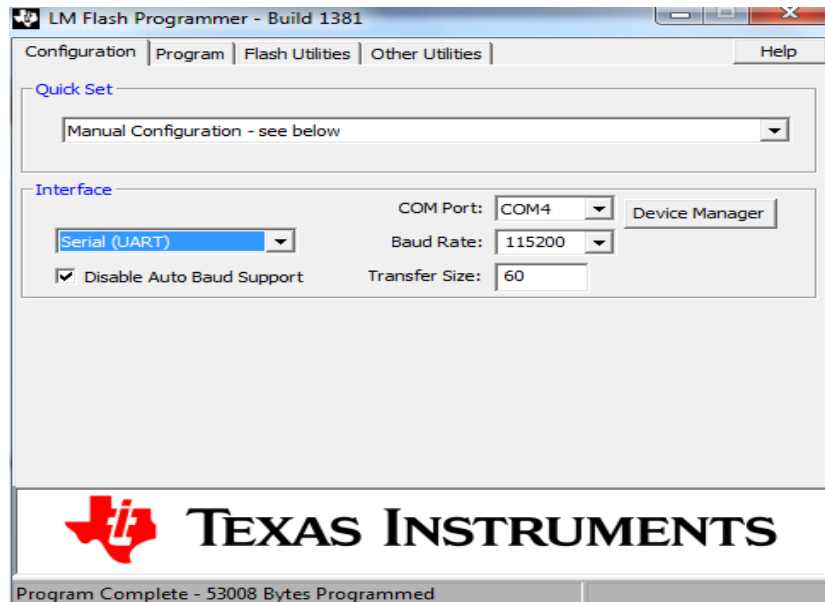
In order to program the radiogate with updated firmware, the use of the LM flash programmer is required which has been provided. Start by connecting the radiogate to the computer via mini USB cable as discussed in the radiogate configuration section on page 17. This cable provides power to the radiogate so external power source is necessary. Open the radiogate configuration screen and connect to the radiogate. Click the bootload button and the message “Bootload Command Was Sent” will be displayed. Also, on the radiogate configuration screen under the MAC address, “Ready for Programming” is visible. This is shown below in Figure 15A. Close the radiogate configuration screen and open the LM flash programmer. The main screen is the one pictured below in Com/flash1. Under configuration, make sure that the fields are filled out or selected as shown. Quickset is set to manual, interface is set to serial with baud rate set to 115200 and transfer size is 60. The COM port may be different as it is selected for you automatically unless it has been saved to reuse. Select the program tab which opens the screen shown in Com/flash2. Ensure that the reset MCU box is checked and the field for the program address offset is 1000. After selecting the firmware file with the browse button, click the program tab in the lower left corner and the process is started. The progress of programming is displayed by percentage and when the programming is complete, it is stated at the very bottom left hand corner of the window (Programming Complete).

COM Port :
COM7

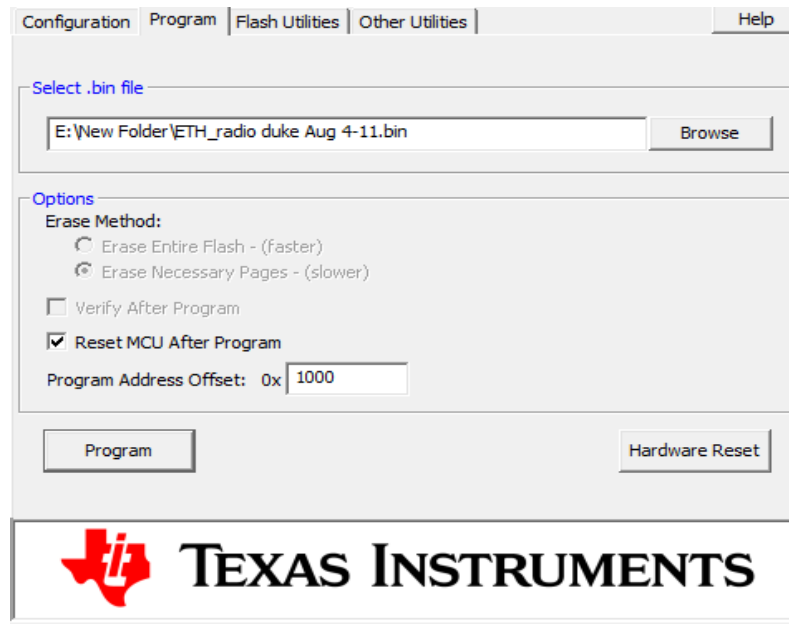
J3:ON - Dynamic IP
MAC: 00-1a-b6-00-80-9f
Ready for programming ...

IP : <input type="text"/> 0.0.0.0 <input type="button" value="Send"/>	Mask : <input type="text"/> 0.0.0.0 <input type="button" value="Send"/>	Gate : <input type="text"/> 0.0.0.0 <input type="button" value="Send"/>
Host : <input type="text"/> 192.1.1.168 <input type="button" value="Send"/>	Port : <input type="text"/> 1701 <input type="button" value="Send"/>	SCDA : <input type="text"/> 502 <input type="button" value="Send"/>
Repeater : <input type="text"/> OFF <input type="button" value="Send"/>	Time : <input type="text"/> 30 <input type="button" value="Send"/>	<input type="button" value="Bootload"/> <input type="button" value="Refresh"/>

Figure 15A



Com/flash 1



Com/flash 2

Data Management

This is the second drop down menu on the home page. This menu provides access to **Import Meters into Database**, **View Collected Data**, **Meter Search** and **Settings** as shown in Figure 20.



Figure 20

Import Meters Into the Database

As mentioned under Meter Setup, when adding meters to the system, meters are entered in the window pictured below in Figure 21. Here adding, editing or removal can be done similarly to the Radiogates Setup. When adding a meter click the **Add** button and a new window will open requesting the communication ID and serial number like the one in Figure 22. Once both fields are filled in, click **OK**. After entering the desired meters click the **Import** button. This finalizes the addition by importing the recent entries into the database. Now, these meters are accessible under **Meter Setup** and **Customer Setup** where the data can be customized. From this location the user may also edit or remove meters.

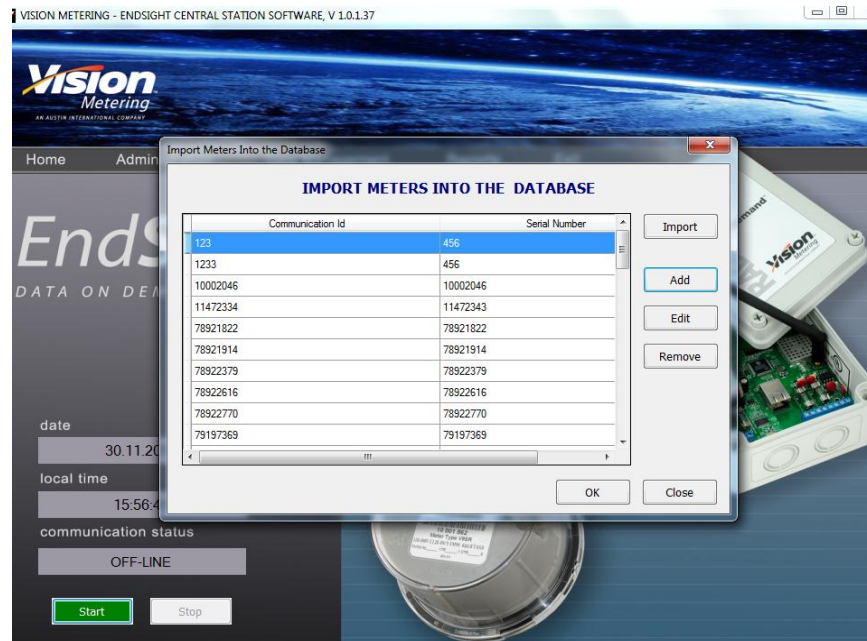


Figure 21

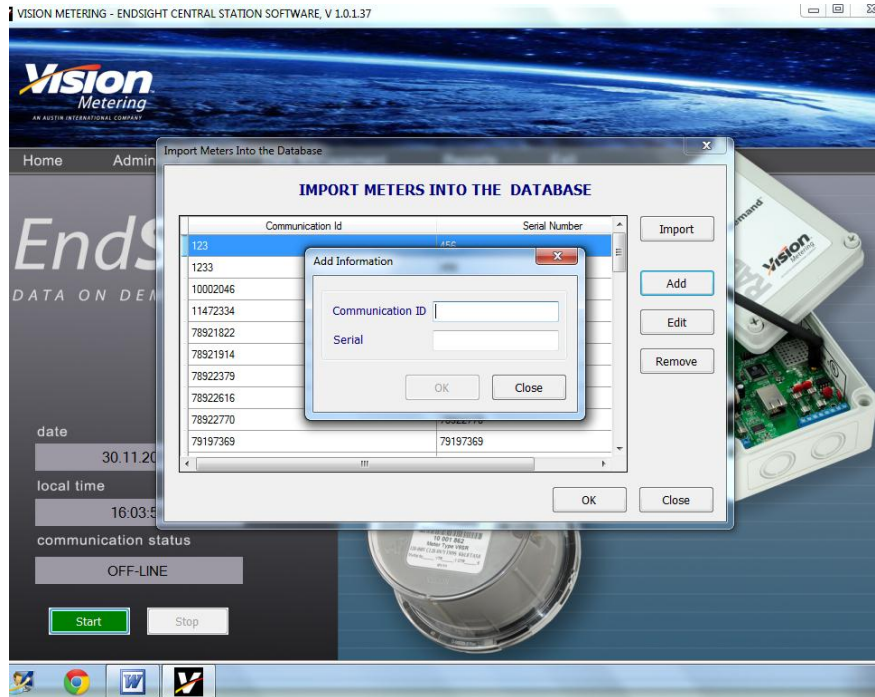
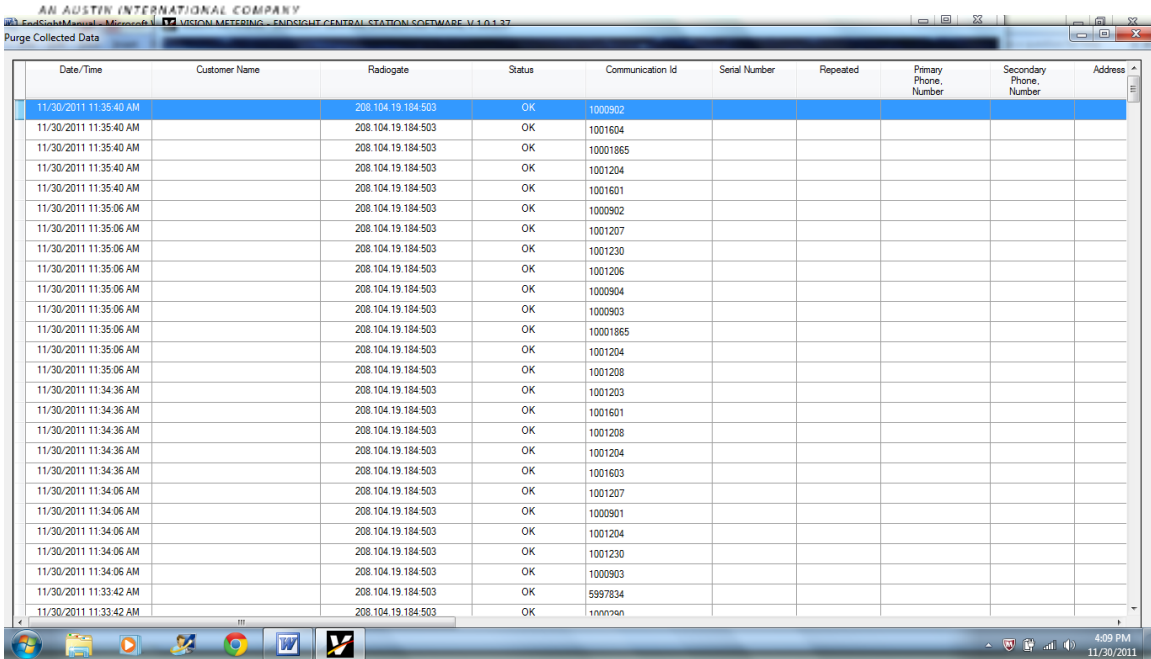


Figure22

View Collected Data

This is located under Data Management and is used to view the data transmitted from the radiogates to the head end computer. The screen is pictured in Figure 23. From this location meter information on usage and connectivity can be viewed. The columns can be widened or narrowed by clicking and dragging the column borders. Click and drag the entire column to move it to a more desirable location with respect to what is seen and in which order. Finding a particular meter's geographic location is done easily by double clicking on that meter here. Including or excluding certain data from this screen can be controlled from the **Settings** menu.



Meter Search

Search By :

Account Id

Address

Last Name

Route#

Stop#

Date/Time	Customer Name	Radiogate	Status	Communication Id	Serial Number	Route#	Stop#	Repeated	Primary Phone Number

100

9/13/2012

The screenshot shows the Vision Metering software interface. At the top, there is a header bar with a search filter dropdown set to 'Last Name'. Below this is a table with columns: Date/Time, Customer Name, Radiogate, Status, Communication Id, Serial Number, Route#, Stop#, Repeated, and Primary Phone Number. A 'Meter Search Parameter' dialog box is open in the center, featuring a text input field labeled 'Last Name' and a 'Search' button.

Figure 24-1

Settings

Lastly under the Data Management menu, the Settings tab opens the screen in Figure 25. **Under User Defined Fields**, the user can customize two user defined fields. In Figure 26 the **Data Columns Visible** tab opens the selectable information the user wishes to see in viewing collected data. Figure 27 shows the **Meter Search Columns Visible** which allows the user to select which information is viewed from searching.

The screenshot shows the 'SETTINGS' dialog box. It has three tabs: 'User Defined Fields', 'Purge Data Columns Visible', and 'Meter Search Columns visible'. The 'User Defined Fields' tab is active, showing two fields: 'Field #1' with the value 'Acct#' and 'Field #2' with the value 'Route#'. At the bottom right, there are 'Update' and 'Close' buttons.

Figure 25

SETTINGS

User Defined Fields Purge Data Columns Visible Meter Search Columns visible

<input checked="" type="checkbox"/> Date/Time	<input checked="" type="checkbox"/> Secondary Phone Number	<input checked="" type="checkbox"/> Current, Phase A, A
<input checked="" type="checkbox"/> Customer Name	<input checked="" type="checkbox"/> Total Energy Delivered, kWh	<input checked="" type="checkbox"/> Current, Phase B, A
<input checked="" type="checkbox"/> Radiogate	<input checked="" type="checkbox"/> Delivered, Phase A, kWh	<input checked="" type="checkbox"/> Current, Phase C, A
<input checked="" type="checkbox"/> Status	<input checked="" type="checkbox"/> Delivered, Phase B, kWh	<input checked="" type="checkbox"/> Voltage-Current, Angle A
<input checked="" type="checkbox"/> Communication Id	<input checked="" type="checkbox"/> Delivered, Phase C, kWh	<input checked="" type="checkbox"/> Voltage-Current, Angle B
<input checked="" type="checkbox"/> Serial Number	<input checked="" type="checkbox"/> Received, Phase A, kWh	<input checked="" type="checkbox"/> Voltage-Current, Angle C
<input checked="" type="checkbox"/> Acct#	<input checked="" type="checkbox"/> Received, Phase B, kWh	<input checked="" type="checkbox"/> Received Signal Strength
<input checked="" type="checkbox"/> Route#	<input checked="" type="checkbox"/> Received, Phase C, kWh	
<input checked="" type="checkbox"/> Repeated	<input checked="" type="checkbox"/> Voltage, Phase A, V	
<input checked="" type="checkbox"/> Address	<input checked="" type="checkbox"/> Voltage, Phase B, V	
<input checked="" type="checkbox"/> Primary Phone Number	<input checked="" type="checkbox"/> Voltage, Phase C, V	

Filter Communication Id: From to

Figure 26

SETTINGS

User Defined Fields Purge Data Columns Visible Meter Search Columns visible

<input checked="" type="checkbox"/> Date/Time	<input checked="" type="checkbox"/> Secondary Phone Number	<input checked="" type="checkbox"/> Current, Phase A, A
<input checked="" type="checkbox"/> Customer Name	<input checked="" type="checkbox"/> Total Energy Delivered, kWh	<input checked="" type="checkbox"/> Current, Phase B, A
<input checked="" type="checkbox"/> Radiogate	<input checked="" type="checkbox"/> Delivered, Phase A, kWh	<input checked="" type="checkbox"/> Current, Phase C, A
<input checked="" type="checkbox"/> Status	<input checked="" type="checkbox"/> Delivered, Phase B, kWh	<input checked="" type="checkbox"/> Voltage-Current, Angle A
<input checked="" type="checkbox"/> Communication Id	<input checked="" type="checkbox"/> Delivered, Phase C, kWh	<input checked="" type="checkbox"/> Voltage-Current, Angle B
<input checked="" type="checkbox"/> Serial Number	<input checked="" type="checkbox"/> Received, Phase A, kWh	<input checked="" type="checkbox"/> Voltage-Current, Angle C
<input checked="" type="checkbox"/> Acct#	<input checked="" type="checkbox"/> Received, Phase B, kWh	<input checked="" type="checkbox"/> Received Signal Strength
<input checked="" type="checkbox"/> Route#	<input checked="" type="checkbox"/> Received, Phase C, kWh	
<input checked="" type="checkbox"/> Repeated	<input checked="" type="checkbox"/> Voltage, Phase A, V	
<input checked="" type="checkbox"/> Address	<input checked="" type="checkbox"/> Voltage, Phase B, V	
<input checked="" type="checkbox"/> Primary Phone Number	<input checked="" type="checkbox"/> Voltage, Phase C, V	

Figure 27

Chapter: 3

Sentry 950

This section of Endsight allows the incorporation of the Vision Sentry 950 handheld reader. Click on the Sentry 950 tab located on the Home page. This screen is shown below in Figure 28-1. Connect the handheld to the computer using the USB cable, select upload flash on the handheld and then select the appropriate COM Port. By clicking the Obtain Data button the screen will retrieve the data from the handheld and display it on this screen. At this point you may select which radiogate the meters would have been read by and click the save button at the bottom right corner of the screen. This action saves the downloaded data to the database.

Communication Id	Read	Note	Total Energy, Phase A, kWh	Total Energy, Phase B, kWh	Total Energy, Phase C, kWh
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Figure 28-1

Chapter: 4

Updating Software

When updating EndSight, it is necessary to change the desktop folder containing the execution files and data/data log files. The contents of the folder located on the desktop looks like the one pictured below in figure29.

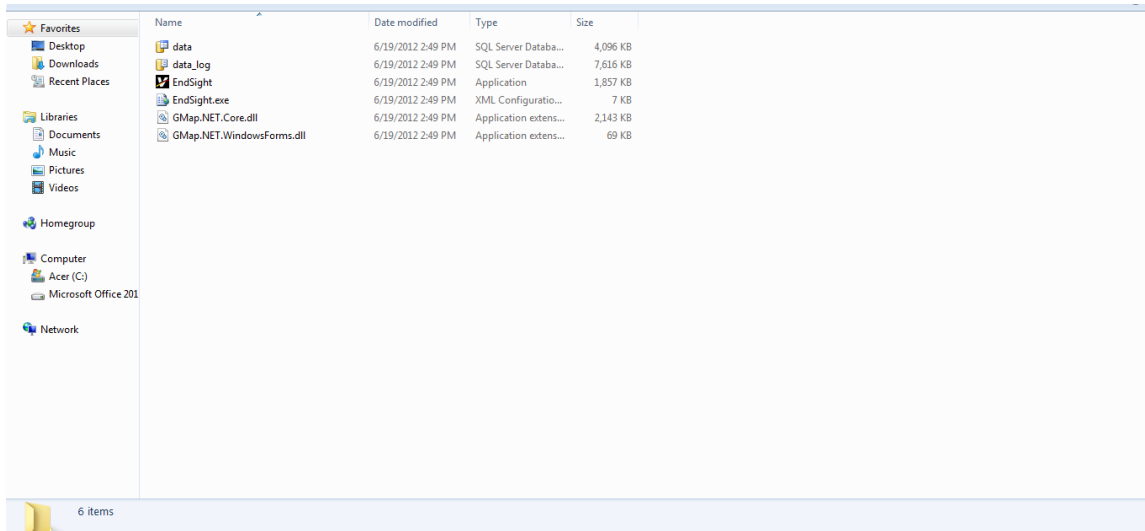


Figure 29

Start by selecting the folder on the desktop and delete it. Next, copy the new folder and paste it to the desktop. Now that the new folder is in place, open the SQL Sever Management Studio and connect it in the same fashion as described in the initial setup section of this text. Double click databases and right click radiogates. This will allow the selection of tasks and then select detach. This set of windows resembles the ones pictured in Figure 30. A new window will open so that the database to be detached can be checked. Select radiogates and then click ok. After the process is complete minimize the studio window and return to the folder previously copied to the desktop. Select both the data and data log files and save them in the radiogates folder on the hard drive in exactly the same manner as the initial setup section. Now that the updated files are once again located in the radiogates folder, the database can now be reattached to the server. Open the studio windows once again, right click databases and select attach. After the new window opens, click add. This is shown in Figure 31. Select the radiogates folder and double click the data file. Click the ok button and wait for the process to complete. The EndSight program can now be opened and run for normal operation. Do not forget to check the connection and fill out the fields in the

Administration/Host Information menu. Refer to back to the Host Information section on page 14. Verify that the radio gates are listed in the **Administration/Radiogate** Setup menu. Refer back to the radiogate setup section on page 20.

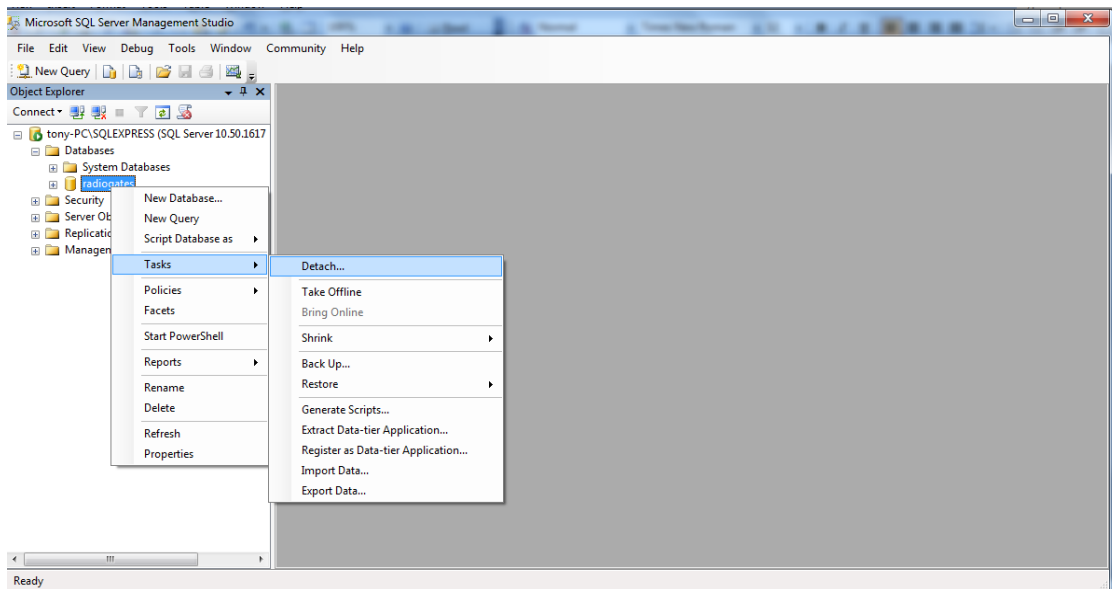


Figure 30

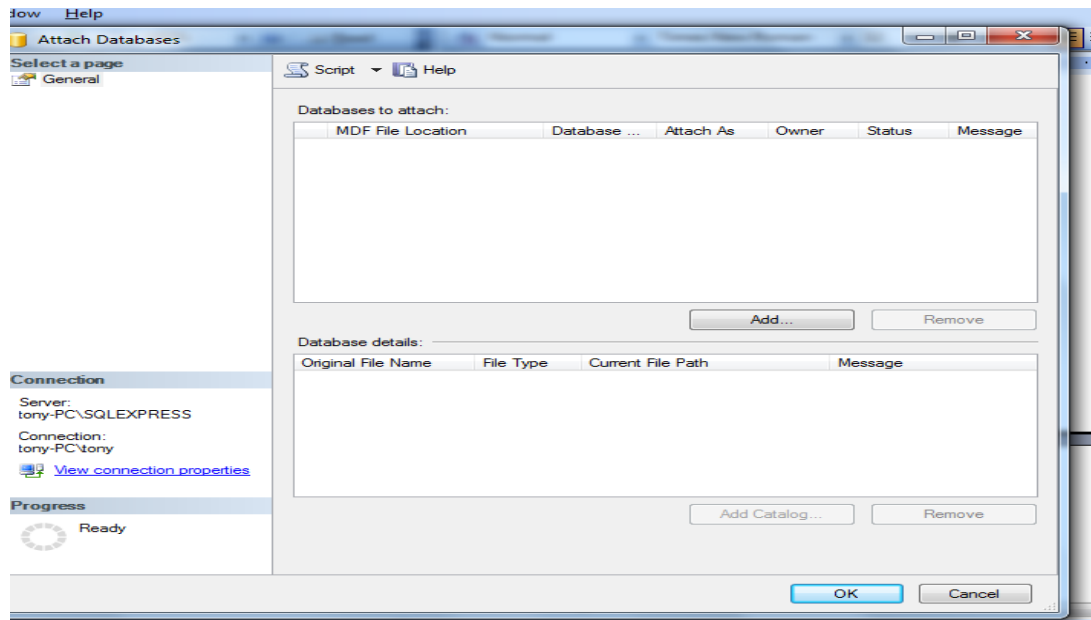


Figure 31